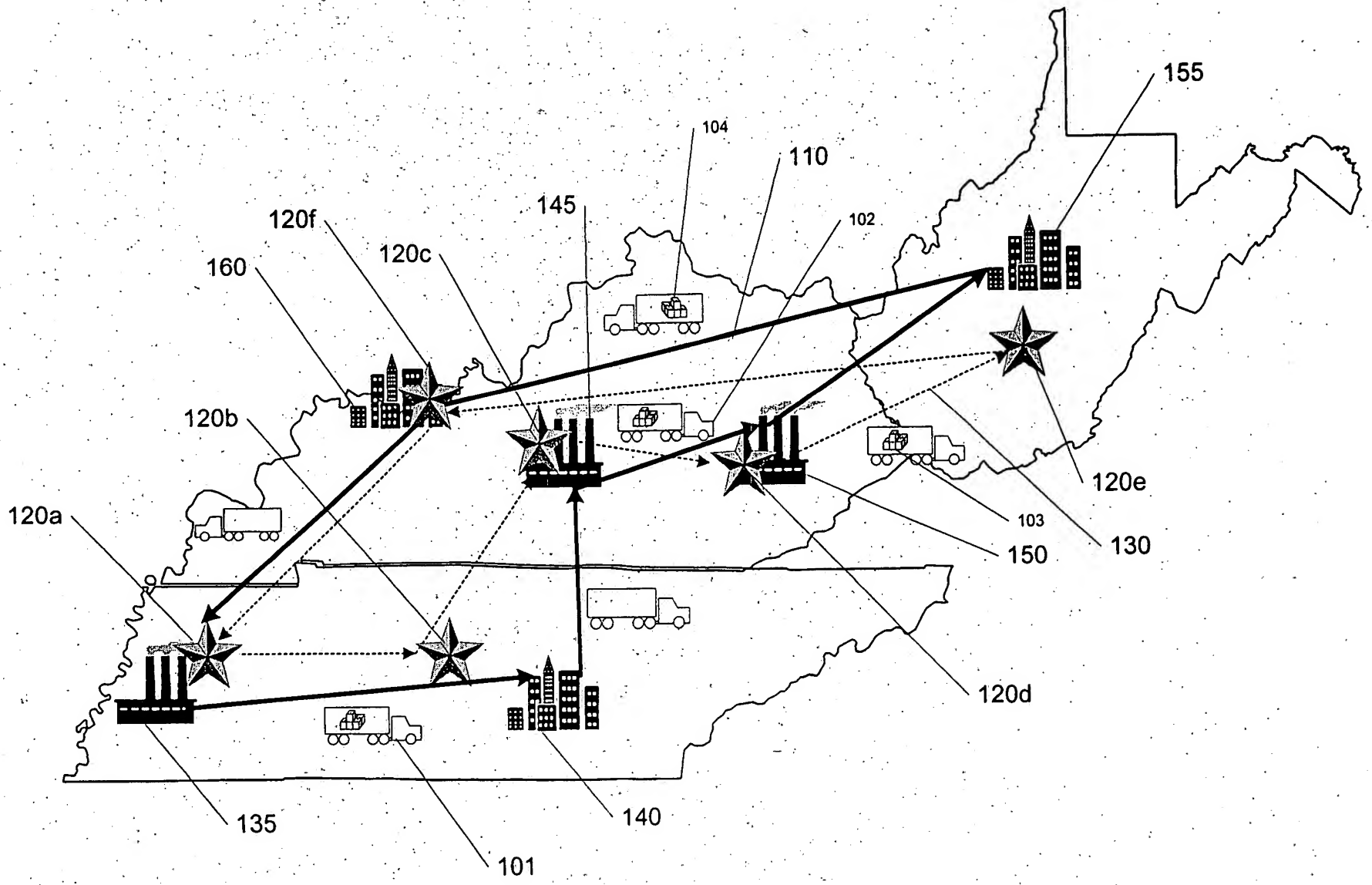

155
104
110
145
102
120f
120c
160
120b
120a
120e
103
150
130
120d
135
101
140

Figure 1

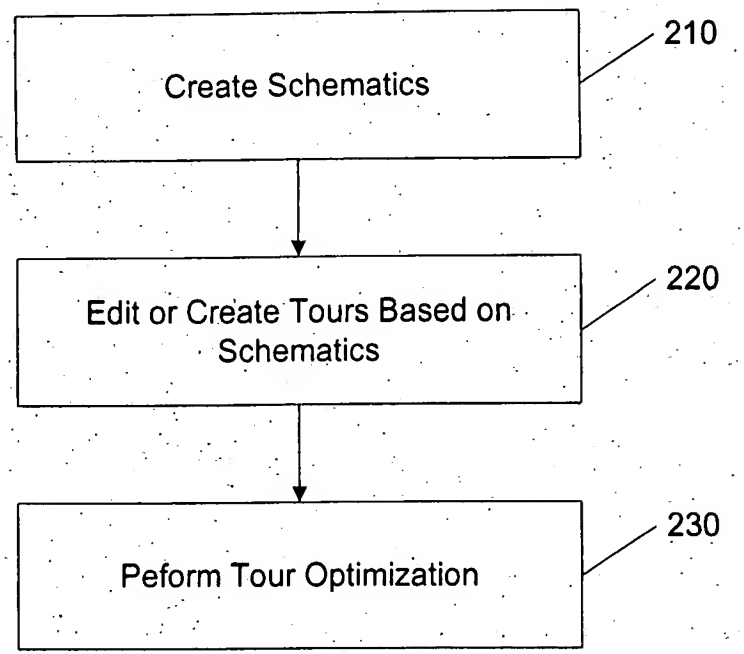

Create Schematics
210
Edit or Create Tours Based on Schematics
220
Peform Tour Optimization
230

Figure 2

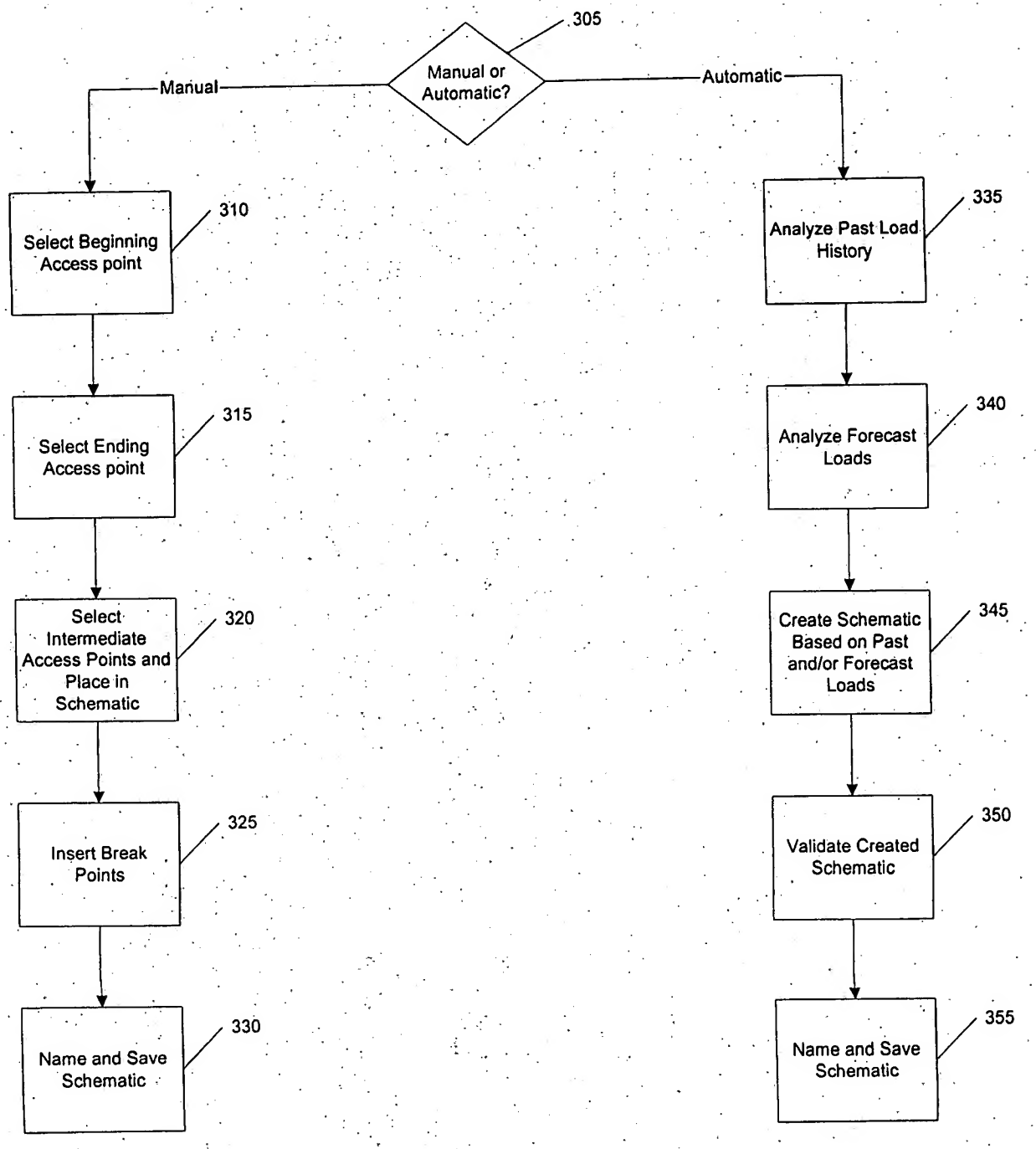

Manual or Automatic?
305
Manual
Automatic
Select Beginning Access point
310
Select Ending Access point
315
Select Intermediate Access Points and Place in Schematic
320
Insert Break Points
325
Name and Save Schematic
330
Analyze Past Load History
335
Analyze Forecast Loads
340
Create Schematic Based on Past and/or Forecast Loads
345
Validate Created Schematic
350
Name and Save Schematic
355

Figure 3

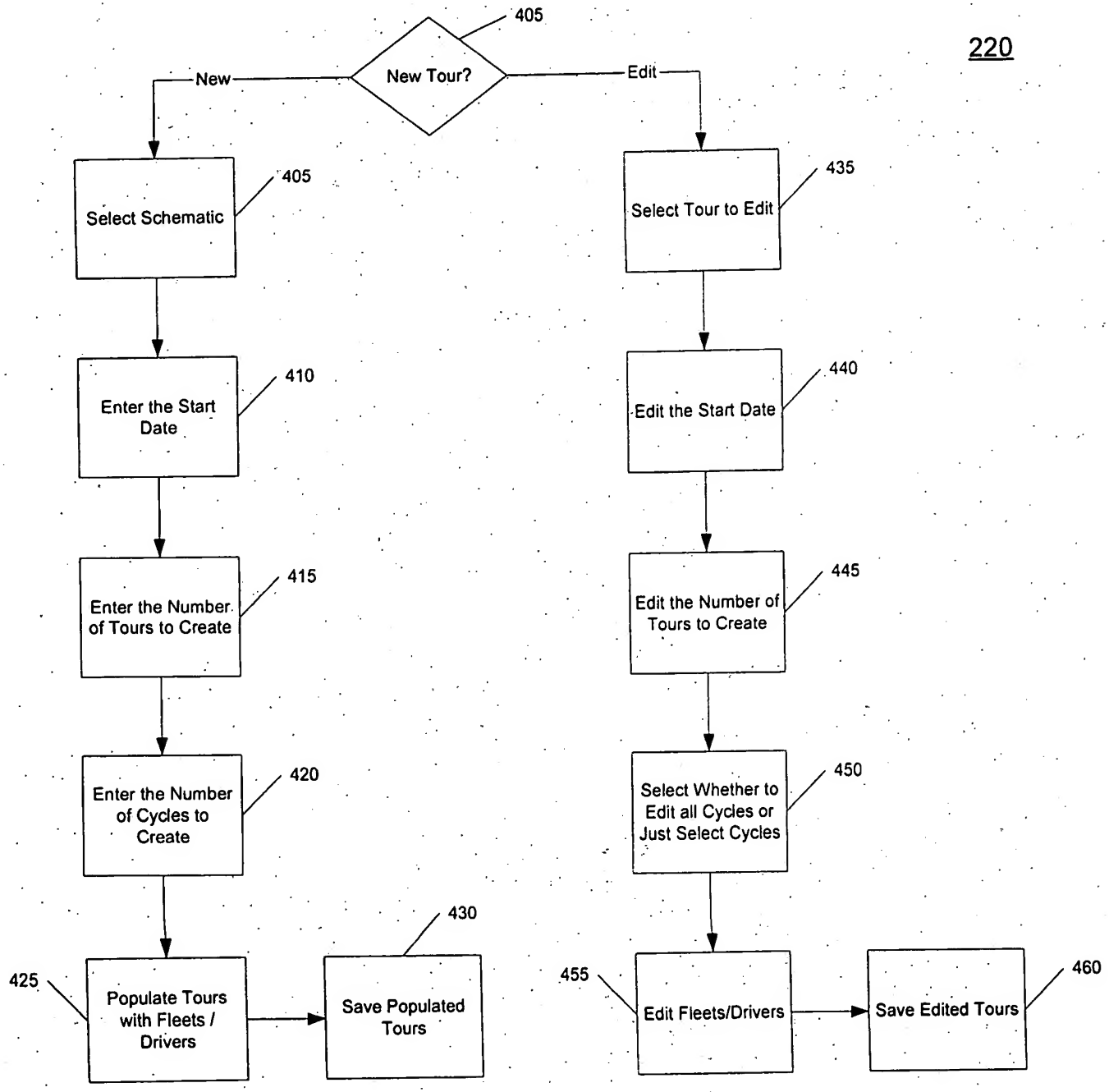

220
405
New Tour?
New
Edit
Select Schematic
405
Enter the Start Date
410
Enter the Number of Tours to Create
415
Enter the Number of Cycles to Create
420
Populate Tours with Fleets / Drivers
425
Save Populated Tours
430
Select Tour to Edit
435
Edit the Start Date
440
Edit the Number of Tours to Create
445
Select Whether to Edit all Cycles or Just Select Cycles
450
Edit Fleets/Drivers
455
Save Edited Tours
460

Figure 4

230

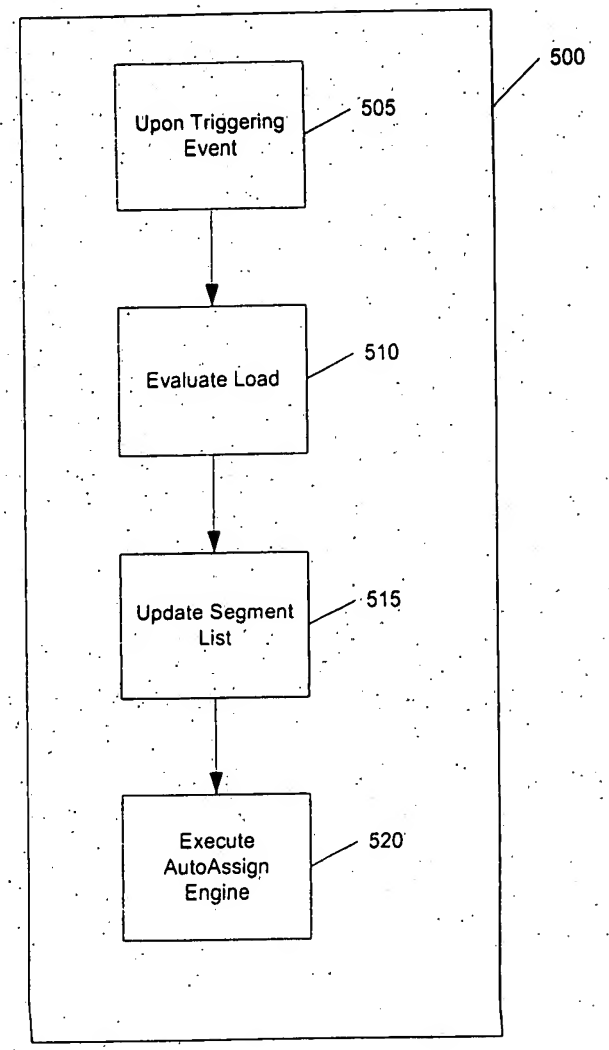

500
Upon Triggering Event
505
Evaluate Load
510
Update Segment List
515
Execute AutoAssign Engine
520

Figure 5

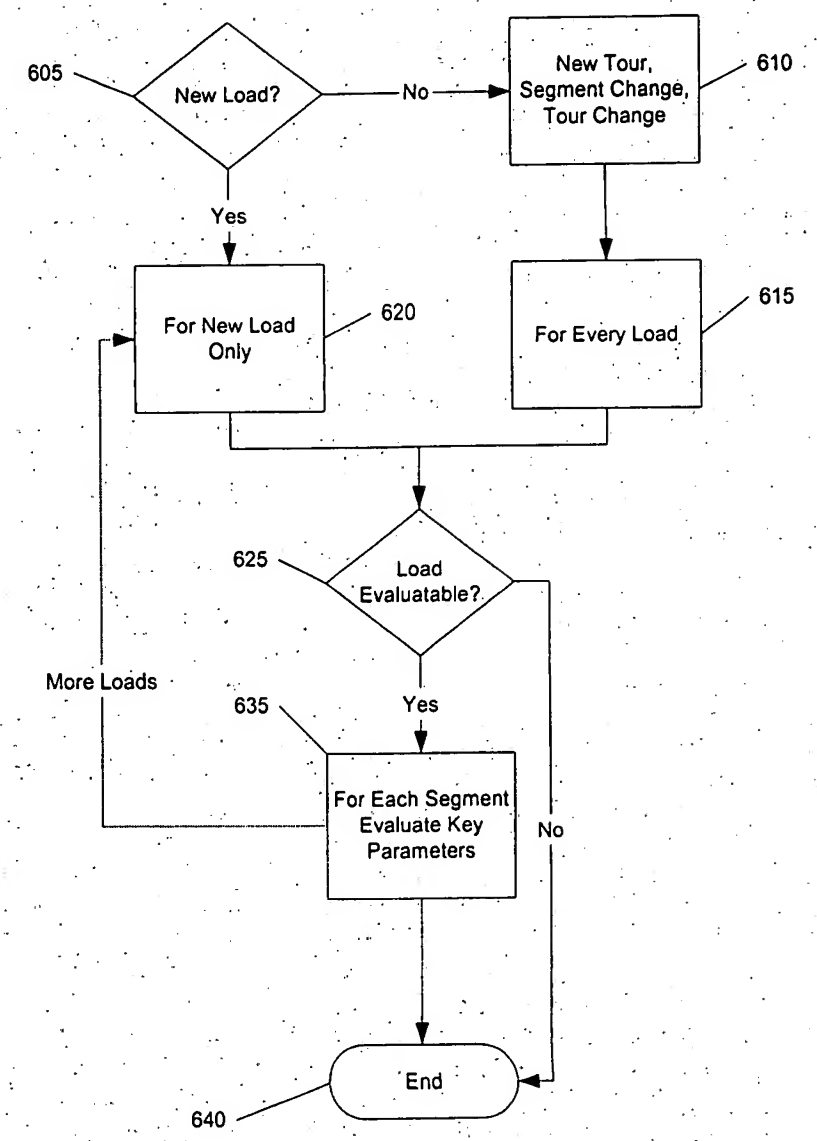

605
New Load?
No
New Tour, Segment Change, Tour Change
610
Yes
For New Load Only
620
For Every Load
615
625
Load Evaluatable?
More Loads
635
Yes
For Each Segment Evaluate Key Parameters
No
End
640

Figure 6

635

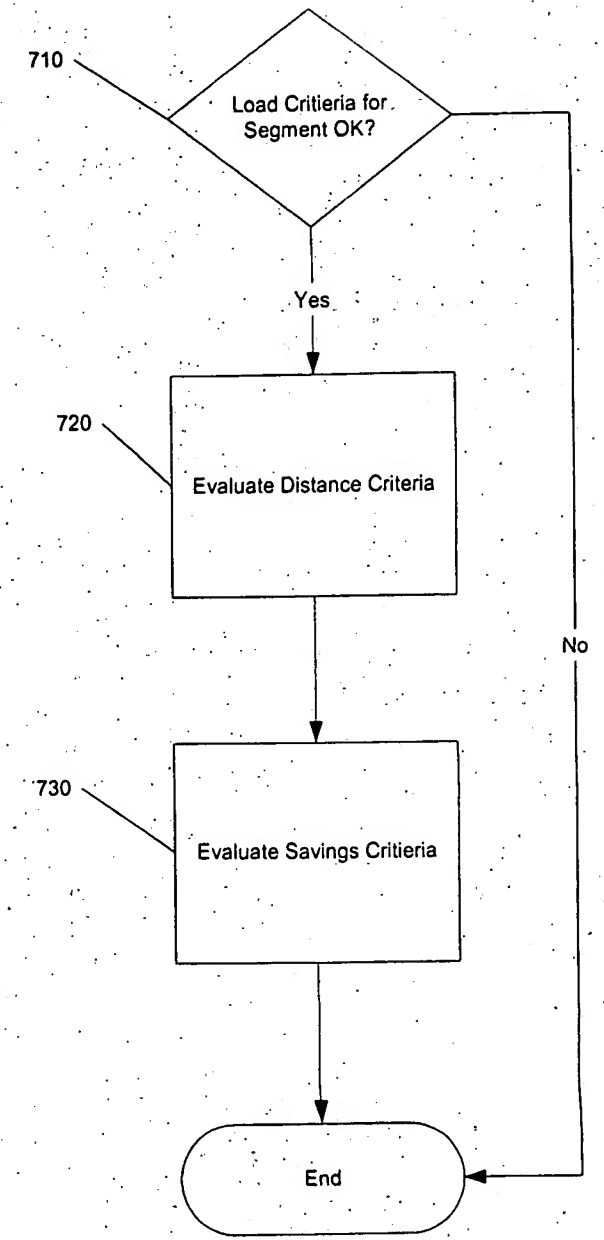

710
Load Critieria for Segment OK?
Yes
No
720
Evaluate Distance Criteria
730
Evaluate Savings Critieria
End

Figure 7

230

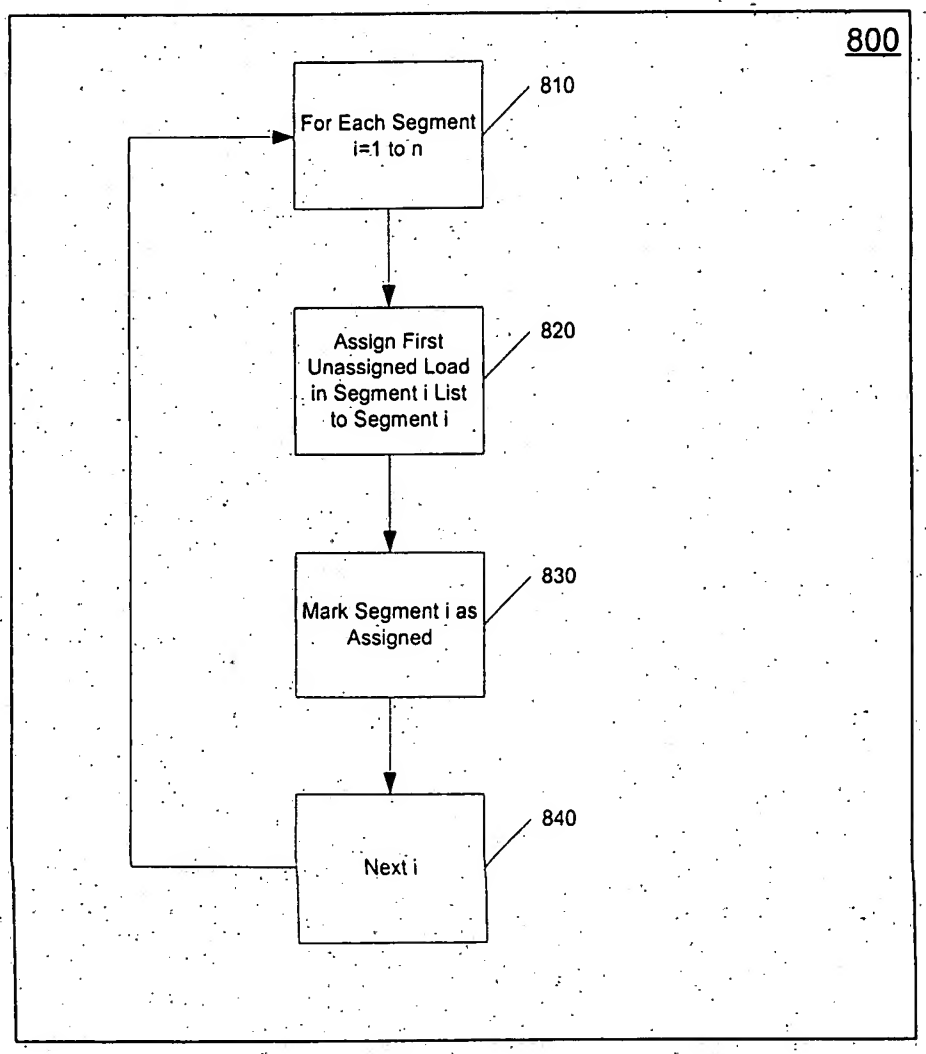

800
For Each Segment i=1 to n
810
Assign First Unassigned Load in Segment i List to Segment i
820
Mark Segment i as Assigned
830
Next i
840

Figure 8

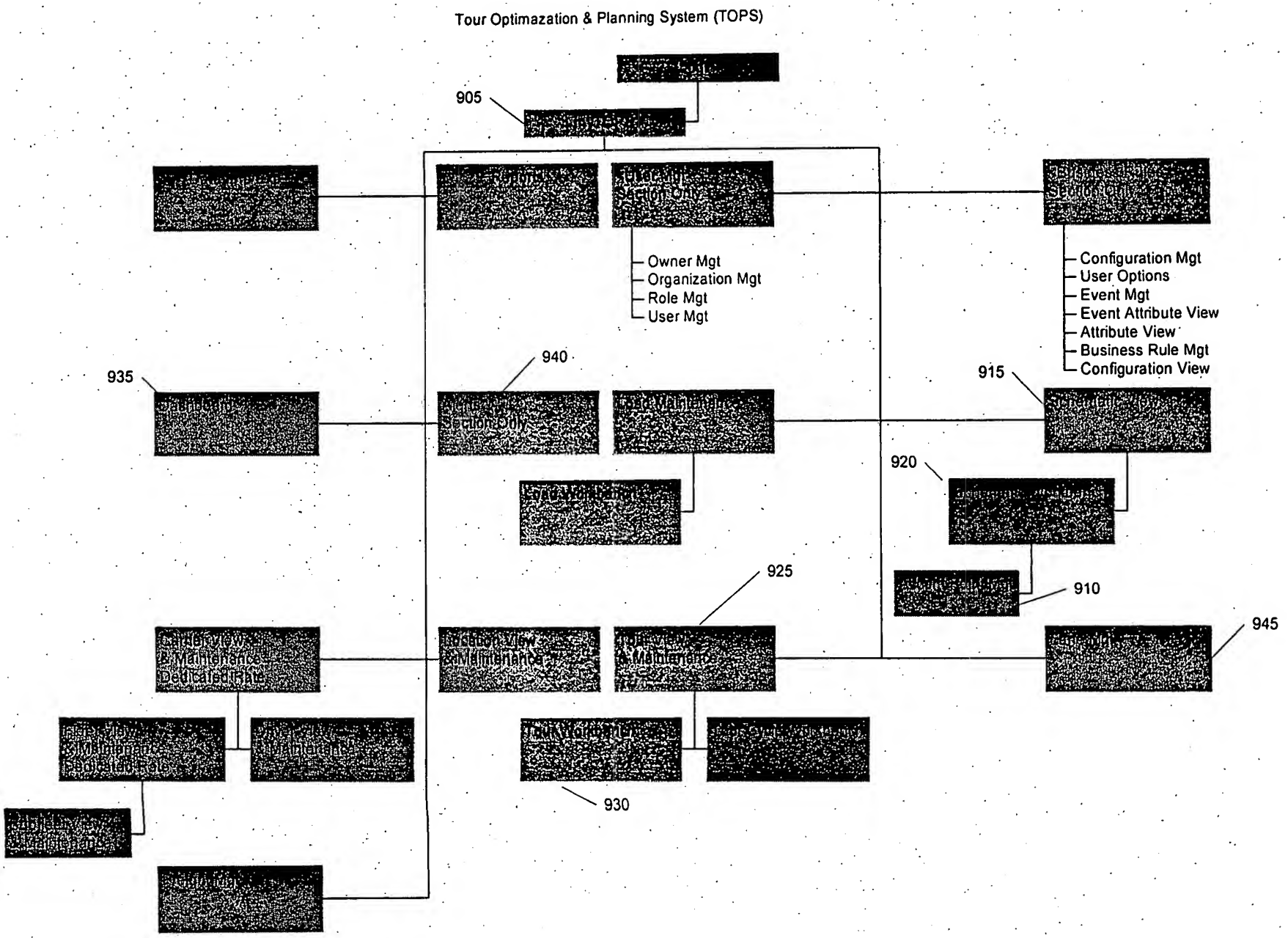

Tour Optimazation & Planning System (TOPS)
905
Owner Mgt
Organization Mgt
Role Mgt
User Mgt
Configuration Mgt
User Options
Event Mgt
Event Attribute View
Attribute View
Business Rule Mgt
Configuration View
940
935
915
920
910
925
945
930

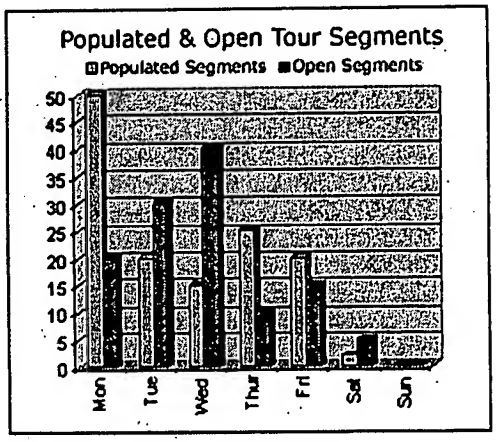
Figure 9

Home Page

Alerts	
Severe	12
Critical	2
Warning	0
Manuals	10

Tour Summary

Status	Tour ID	# Segments	Open Segments	Dead Head	$$
I	1011	5		400	$1,250



Carrier Summary

						Sun	Mon	Tue	Wed	Thu	Fri	Sat
Long Haul	⊞ Schneider	⊟ Fleet		Avg. Miles	Dead Head %	Number of Tours	70	50	55	35	35	7	0
		⊟ GBY1	Driver1	1200	8%	Available Loads	50	40	40	20	30	7	0
			Driver2	1500	9%								
Local	⊞ Dart	⊟ Fleet		Avg. No of Loads Per Driver									
		⊟ SRM1	Driver 1	10									

Figure 10

910

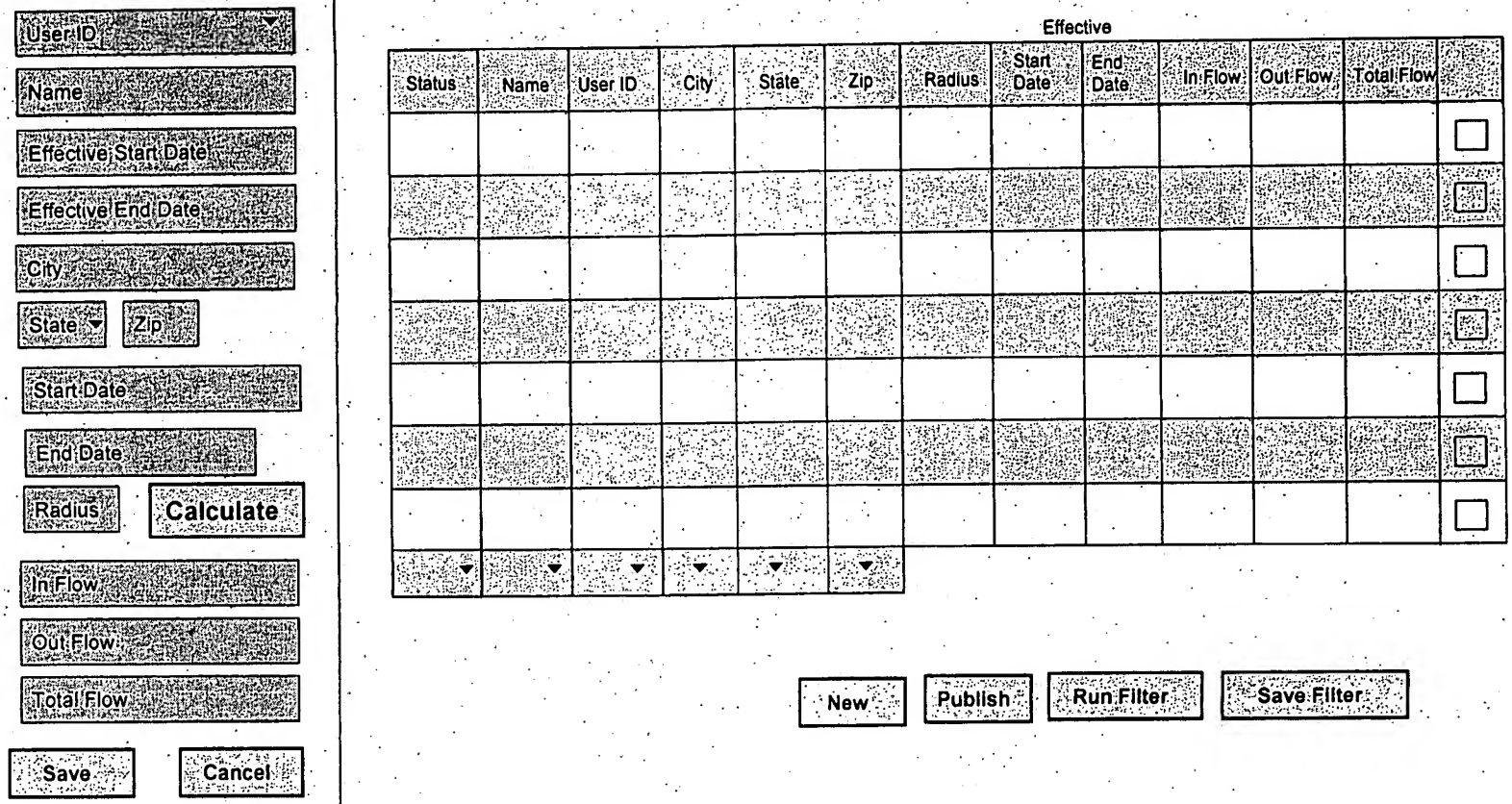


Figure 11

915

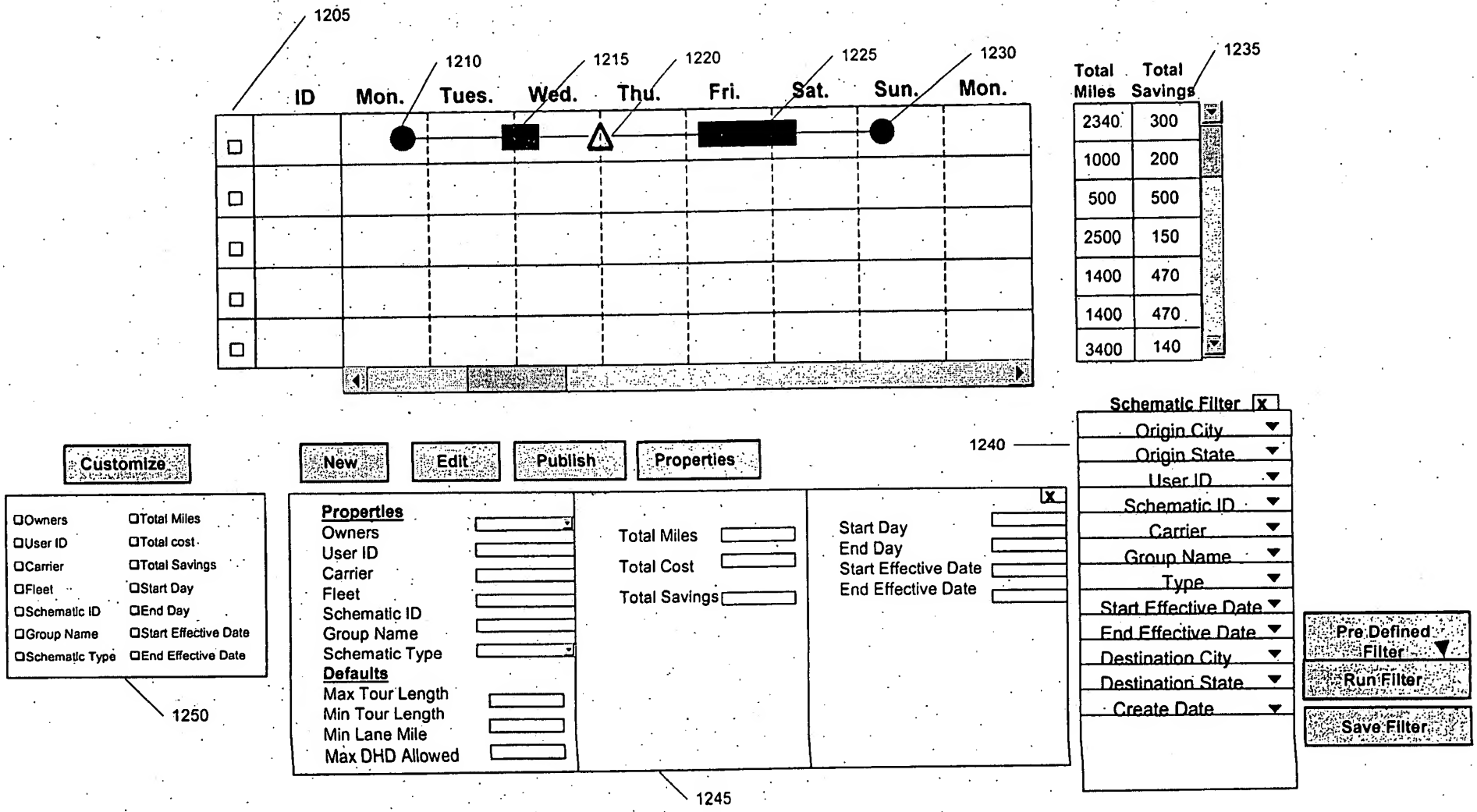


Figure 12

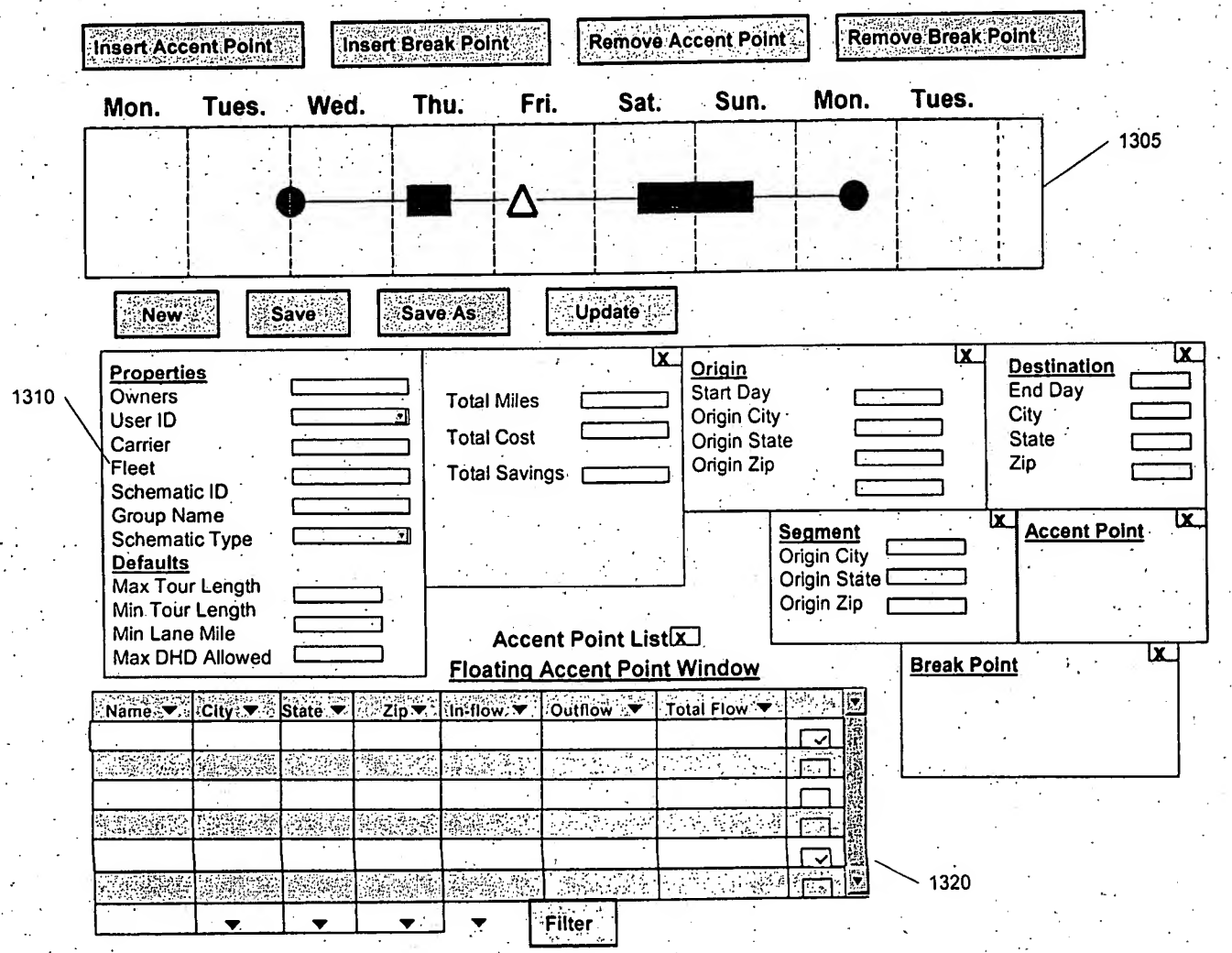

Insert Accent Point
Insert Break Point
Remove Accent Point
Remove Break Point
Mon.
Tues.
Wed.
Thu.
Fri.
Sat.
Sun.
Mon.
Tues.
1305
New
Save
Save As
Update
1310
Properties
Owners
User ID
Carrier
Fleet
Schematic ID
Group Name
Schematic Type
Defaults
Max Tour Length
Min Tour Length
Min Lane Mile
Max DHD Allowed
Total Miles
Total Cost
Total Savings
Origin
Start Day
Origin City
Origin State
Origin Zip
Destination
End Day
City
State
Zip
Segment
Origin City
Origin State
Origin Zip
Accent Point
Break Point
Accent Point List
Floating Accent Point Window
Name
City
State
Zip
In-flow
Outflow
Total Flow
1320
Filter

Figure 13

925

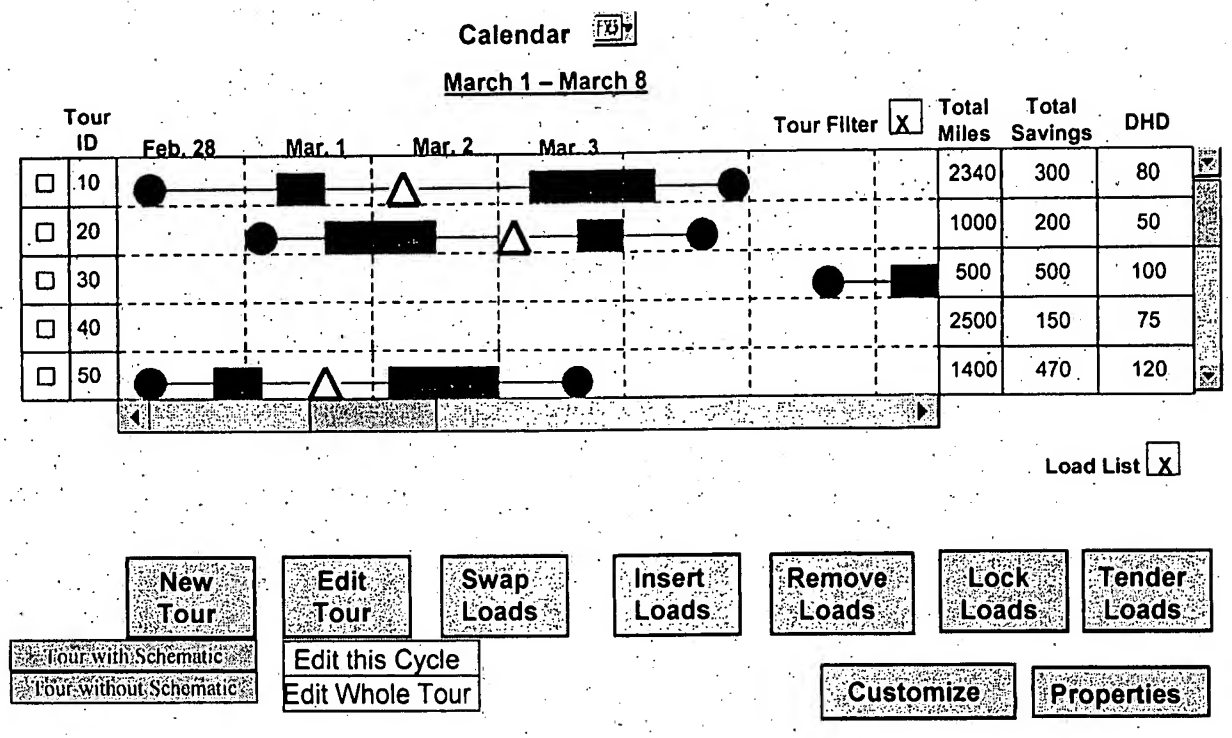


Figure 14

925

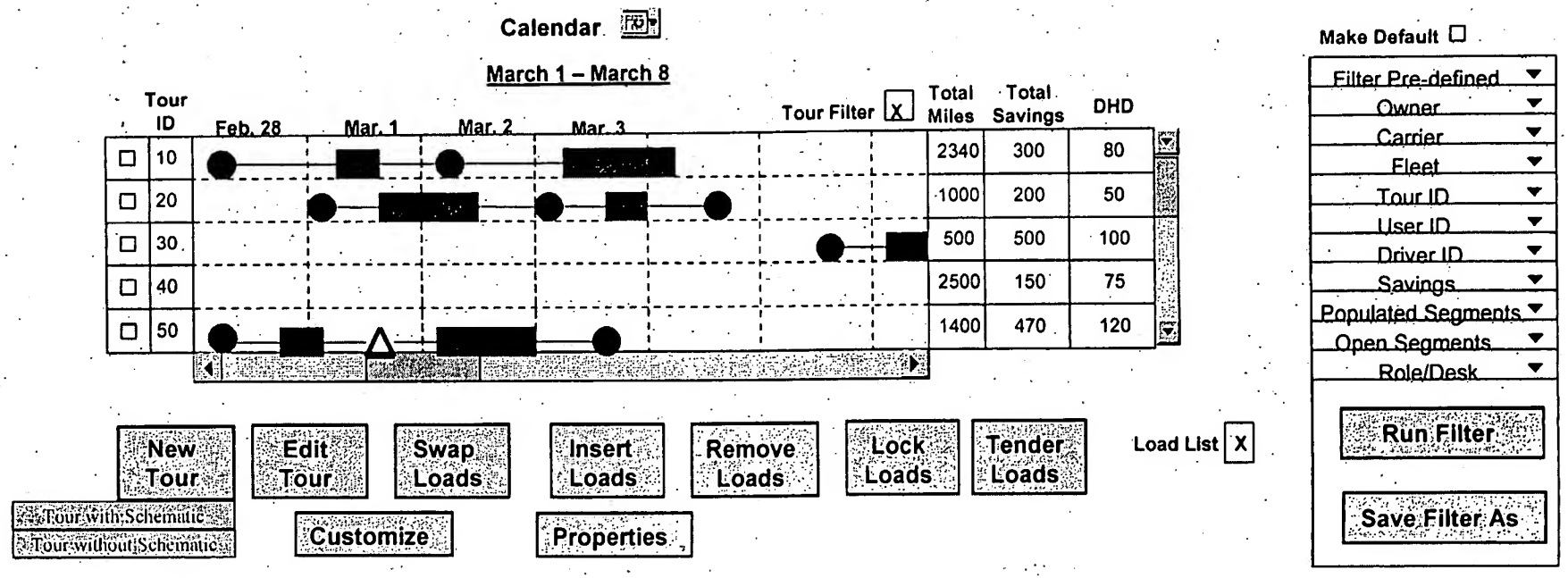


Figure 15

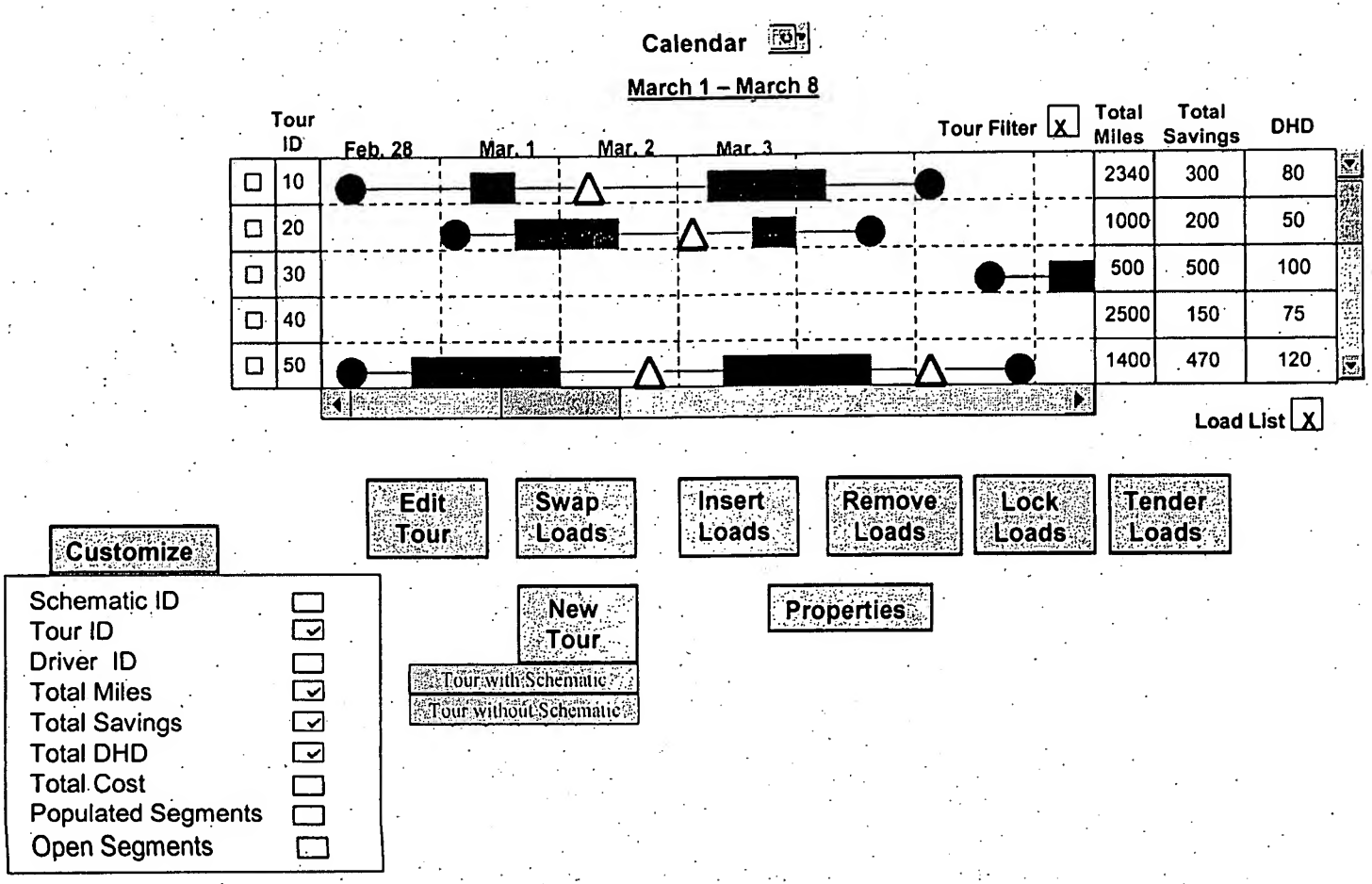

Calendar
March 1 – March 8
Tour ID
Feb. 28
Mar. 1
Mar. 2
Mar. 3
Tour Filter
Total Miles
Total Savings
DHD
10
20
30
40
50
2340
300
80
1000
200
50
500
500
100
2500
150
75
1400
470
120
Load List
Edit Tour
Swap Loads
Insert Loads
Remove Loads
Lock Loads
Tender Loads
Customize
Schematic ID
Tour ID
Driver ID
Total Miles
Total Savings
Total DHD
Total Cost
Populated Segments
Open Segments
New Tour
Tour with Schematic
Tour without Schematic
Properties

Figure 16

930

1705

Schematic Grid **Schematic Filter** ☐

Group Name	Sch ID	User ID	Orign	AP1 Name	City	State	AP2 Name	City	State	AP3 Name	City	State	Destination	Total Miles	Cost	Savng	
																	☐
																	☐
																	☐

Customize | No of Tours | Start Date | No. of Cycle | Enter | Tour ID Prefix | Assign Driver

- ☐ Group Name
- ☐ Schematic ID
- ☐ User ID
- ☐ Total Miles
- ☐ Total Cost
- ☐ Total Savings
- ☐ Eff. Start Date
- ☐ Eff. End Date

Spawned Tour Grid

Add Driver ID, SCAC-Carr and SCAC-Fleet Columns

Add Effective Start and End Date Columns. Attach a calendar icon

Start Date	Tour ID	User ID	Orign	AP1 Name	City	State	AP2 Name	City	State	AP3 Name	City	State	Destination	Total Miles	Cost	End Date	
																	☐
																	☐
																	☐

Edit | Save | Delete | Cancel

1710

Figure 17

Dashboard

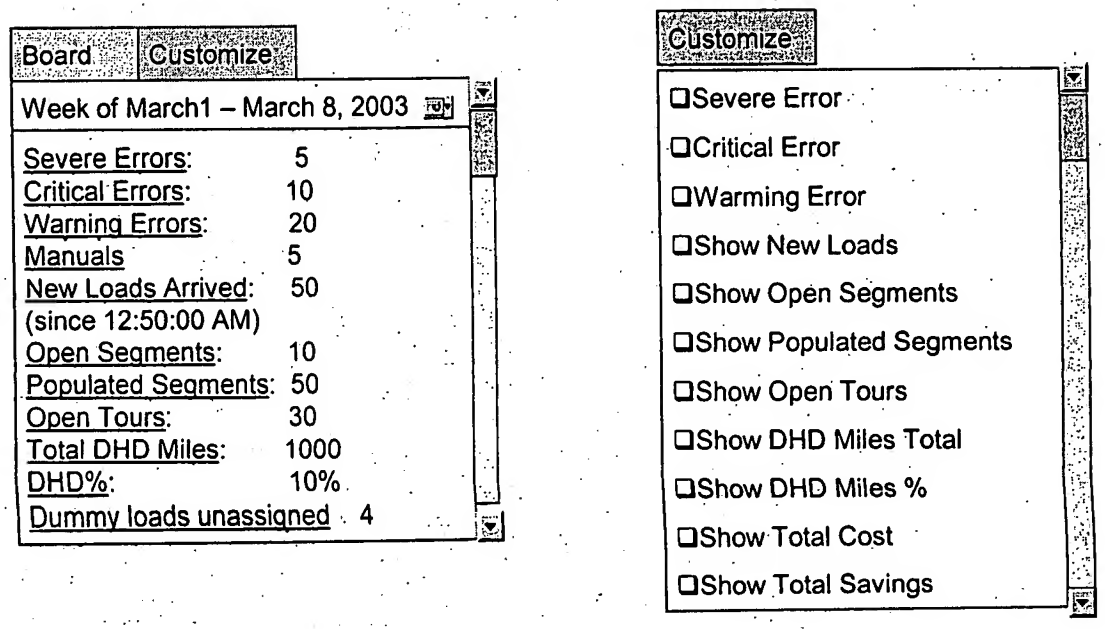


Figure 18

Alerts

940

+ Severe: 5

	ID	Status	Description	Action	User	Time Created	Time Acted
☐							
☐							
☐							

+ Critical: 10

	ID	Status	Description	Action	User	Time Created	Time Acted
☐							
☐							
☐							

+ Warning: 20

	ID	Status	Description	Action	User	Time Created	Time Acted
☐							
☐							
☐							

Read | Delete | Status As | Resolved | Cancelled | Open | Pending | Mail To | User ID

Figure 19

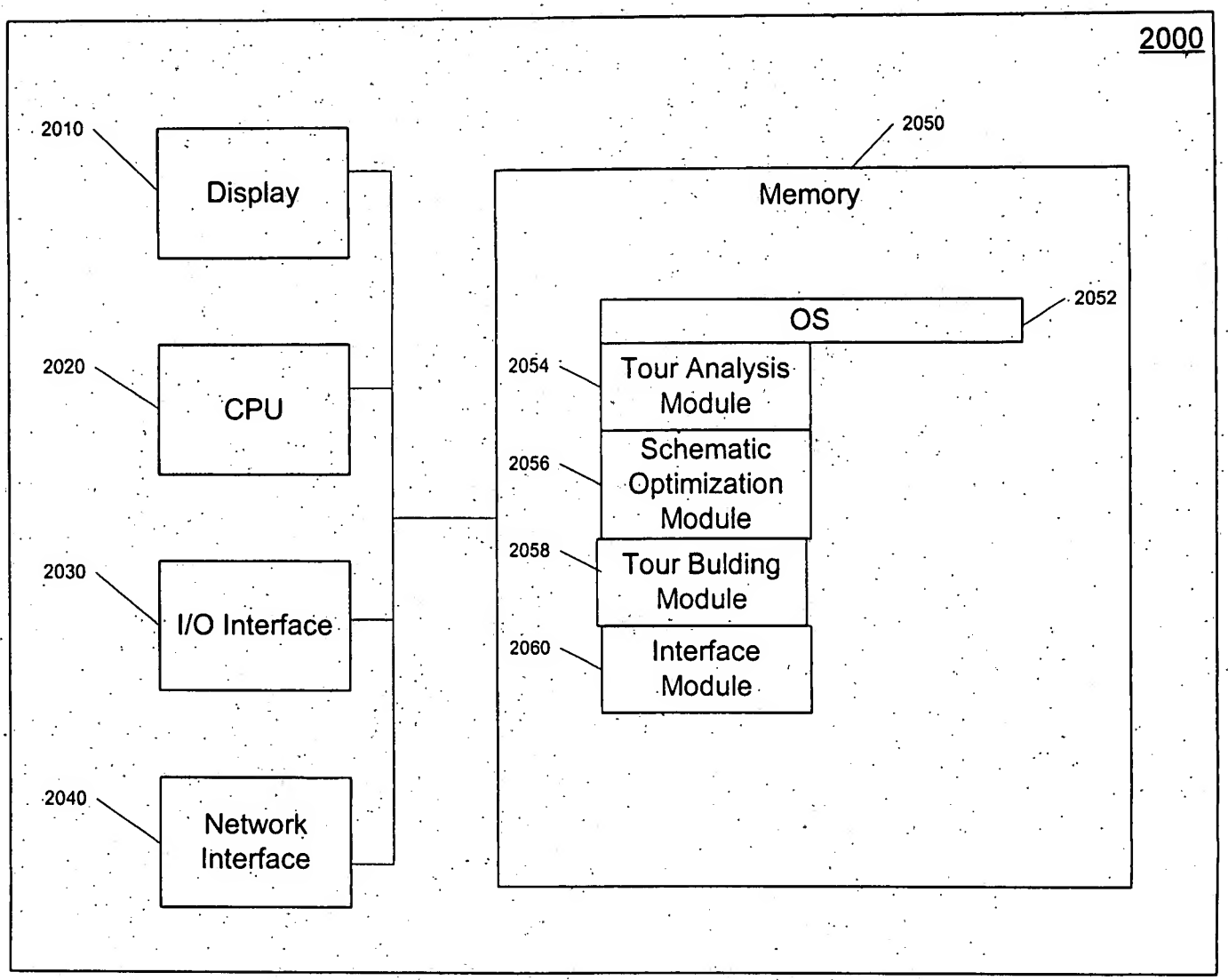

2000
2010
Display
2020
CPU
2030
I/O Interface
2040
Network Interface
2050
Memory
OS
2052
2054
Tour Analysis Module
2056
Schematic Optimization Module
2058
Tour Bulding Module
2060
Interface Module

Figure 20